

### Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The non-final Office Action dated May 24, 2004, indicated that prosecution has been reopened; claims 1, 2, 6-12, 16-19 and 23 are rejected under 35 U.S.C. §§ 102(a) and 102(e) over *Yoshida* (U.S. Patent No. 6,137,295); claims 3-5, 13, 21 and 22 are rejected under 35 U.S.C. §103(a) over *Yoshida* in view of *Talbot et al.* (U.S. Pat. No. 6,019,249) or *Steffan et al.* (U.S. Pat. No. 6,200,823); claim 13 is rejected under 35 U.S.C. §103(a) over *Yoshida* in view of *Gauthier et al.* (U.S. Patent No. 4,172,228), *Zingher* (U.S. Patent No. 4,443,278) and *Nakasuji* (U.S. Patent No. 6,465,783); claim 14 is rejected under 35 U.S.C. § 103(a) over *Yoshida* in view of *Ishihara et al.* (U.S. Patent No. 6,185,324); claim 15 is rejected under 35 U.S.C. § 103(a) over *Yoshida* in view of *Talbot et al.* or *Steffan et al.* and further in view of *Lo et al.* (U.S. Patent No. 6,344,750) and *Cole, Jr.* (U.S. Patent No. 5,523,694); claim 22 is rejected under 35 U.S.C. § 103(a) over *Yoshida* in view of *Talbot et al.* or *Steffan et al.* and further in view of *Kim et al.* (U.S. Patent Appln. No. 2002/0043628A1) and *Yamazaki et al.* (U.S. Patent No. 6,038,018); claims 24-27 are rejected under 35 U.S.C. § 103(a) over *Yoshida* in view of *Nakasuji*, *Guathier et al.*, *Zingher* and *Ishihara et al.*; and claims 28 and 29 are rejected under 35 U.S.C. § 103(a) over *Yoshida* in view of *Lo et al.* (U.S. Patent No. 6,504,393).

Applicant generally traverses each of the Section 103(a) rejections because the Office Action fails to present a combination of references that corresponds to each of the claimed limitations. The Office Action presents a number of combinations of references without explaining how the references would combine to teach the claimed invention, which is directed to the use of a SEM contemplated to navigate and scan an SOI modified structure. More particularly, the Office Action fails to identify how the '295 reference would be modified with the cited references to enable a SEM to navigate the SOI modified structure in accordance with the instant invention. *See*, col. 7, line 12 *et seq.* The '295 teachings state that a location must be pre-designated in order for a defect to be observed so that a hole can be created for observation through the backside. This hole is further limited to places in which the operation of the integrated circuit would not be hindered. *See*, col. 6,

lines 33-46. The Office Action fails to identify how the modified '295 reference would use a SEM in connection with these observation holes to correspond to the claimed invention. Without a presentation of correspondence to each of the claimed limitations, the Section 103(a) rejections are improper.

The Office Action further fails to identify how the combined references teach the specific limitations directed to the claimed navigating and scanning using a SEM. For example, claim 17 includes limitations directed to data for probe navigation in an SOI modified structure. The Office Action fails to show how the asserted combination would navigate the numerous transistors in the device. No correspondence has been alleged with respect to the limitations of claim 24 regarding directing an electron beam (*e.g.*, locating via navigating) to the exposed region of the insulator. The Office Action also ignores limitations in claims 28 and 29 directed to scanning an electron beam across the exposed region. Thus, the Office Action fails to present correspondence to each of the claimed limitations and Applicant accordingly requests that the rejections be withdrawn.

Moreover, Applicant respectfully traverses the Section 103(a) rejection of claims 3-5, 13, 21 and 22 in paragraph 7, because the proposed modification of the '295 reference is improper as the proposed modification would frustrate the operation of the '295 reference. The MPEP states that when a proposed modification would render the teachings being modified unsatisfactory for their intended purpose, then there is no suggestion or motivation to make the proposed modification under 35 U.S.C. § 103(a). *See*, MPEP § 2143.01. The Office Action suggests replacing the '295 EB tester with the SEM device of the '249 reference or '823 reference. The '295 reference stresses the importance of its EB tester by stating that it is indispensable. Col. 1, lines 33-35. The structure and operation of the EB tester are further discussed in detail throughout the rest of the reference. Replacing such an indispensable part of the '295 teachings with the SEM of the '249 reference or '823 reference would render the '295 teachings inoperable due to the absence of an indispensable part. To suggest modifying the '295 reference to remove an indispensable feature is untenable and improper. Accordingly, Applicant requests that the Section 103(a) rejection be withdrawn.

Generally, the cited secondary references relied upon in each of the remaining Section 103(a) rejections fails to teach a SOI structure of a wafer; thus, when used to modify

the '295 reference, each of the resulting combinations fails to yield the necessary benefits of the claimed SOI structure and implementation. Applicant respectfully traverses each of the remaining Section 103(a) rejections for this failure to correspond to the claimed invention and requests that each of the rejections be withdrawn.

With respect to independent claims 1, 16 and 17, Applicant has amended each of the claims to include limitations of underlying claims directed to the use of a SEM. The Office Action acknowledges at page 5 that the '295 reference fails to teach the use of a SEM. In further view of the arguments above regarding the failure of the Office Action to present any *prima facie* Section 103(a) rejections, independent claims 1, 16 and 17 along with their respective dependent claims are believed to be patentable over the cited references. Accordingly, Applicant requests that the Section 102 rejection be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

Respectfully submitted,

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Dated: August 20, 2004

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